



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,357	09/09/2003	Joseph Bibb Cain	GCSD-1467 (51333)	2108
27975	7590	09/02/2005	EXAMINER	
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791			CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/658,357	CAIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hong Cho	2662	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/8/2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. This office action is in response to the amendment filed on 8/8/2005. Claims 1-22 are pending in the instant application.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Larsson et al (USPUB 20030161268), hereinafter referred to as Larsson.

Re claims 1, 2, 7, 12, 13 and 18, Larsson discloses a wireless multihop network (*a mobile ad hoc network (MANET)*, figure 3) comprising a plurality of mobile nodes each comprising a wireless communication device (figure 14, element 120) and a controller (figure 14, element 110) operating in accordance with a multi-layer protocol hierarchy. Larsson discloses the application layer setting multiple data rate requirements (*establishing a quality of service (QoS) threshold*, paragraph [0179], lines 5-14).

Larsson discloses setting physical link parameters along the path from the source node to the destination node to find a feasible path and sending the data over the selected path *(determining the QoS metric for the at least one selected route and receiving data from the at least one source mobile node via the at least selected route, paragraphs [0096-0097])*. Larsson discloses a wireless communication device adjusting transmit power to guarantee that the resulting CIR (Carrier-to-Interference Ratio) is not deteriorated below a certain CIR level *(adjusting signal reception gain and pattern when the QoS metric has fallen below the QoS threshold, paragraph [0170], lines 1-9)*.

Re claims 3, 8, 14 and 19, Larsson discloses the upper protocol layer being an application layer ((paragraph [0052], lines 6-8).

Re claims 4, 9, 15 and 20, Larsson discloses the intermediate protocol layer being a network layer ((paragraph [0052], lines 2-5).

Re claims 5, 10, 16 and 21, Larsson discloses the lower protocol layer being a physical layer (paragraph [0052], lines 2-5).

Re claims 6, 11, 17 and 22, Larsson discloses the quality of service based on error rate (paragraph [0170]).

#### ***Response to Arguments***

4. Applicant's arguments filed on 8/8/2005 have been fully considered but they are not persuasive.

On page 13 the Applicant argues that Larsson does not teach that a QoS threshold is established at an upper layer protocol, and that the established QoS threshold is used in an intermediate protocol layer determination and for adjusting signal reception gain at a lower protocol layer. The Examiner respectfully disagrees. QoS routing protocols in ad hoc network is to set up a path from a source node to a destination node fulfilling some requirements regarding bandwidth or delay to be able to support real-time multimedia application. Larsson discloses multiple data requirements given by the application layer (*a QoS threshold is established at an upper layer protocol*, paragraph [0179], lines 13-14), determining the optimal route determined by integrated optimization (abstract, lines 8-10), and adjusting transmit power level to obtain QoS measure in the network (*adjusting signal reception gain at a lower protocol layer*, paragraph [0170], lines 7-9). Therefore, the Examiner concludes that the rejection of claims 1-22 is proper.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
- A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from

Art Unit: 2662

the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho  
Patent Examiner  
8/26/2005



**JOHN PEZZLO**  
**PRIMARY EXAMINER**